

CLUSTAL W (1.82) multiple sequence alignment

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Mus_musculus      -----ATGCTCCTTTTCGGTGCCGCTCCTGCTTGGCCT 32
Ratus_norvegicus  -----ATGCTCCTTTTCGGTGCCGCTCCTGCTTGGCCT 32
Homo_sapiens      -----ATGCTGCTATCCGTGCCGTTGCTGCTCGGCCT 32
Oryctolagus_cuniculus -----ATGCTGCTCCCTGTGCCGCTGCTGCTCGGCCT 32

Mus_musculus      CCTCGGCCTGGCCGCCGAGACCCTGCCATCTATTTCAAAGAGCAGTTCT 82
Ratus_norvegicus  CCTCGGCCTGGCTGCCGAGACCCTGCCATCTATTTCAAAGAGCAGTTCT 82
Homo_sapiens      CCTCGGCCTGGCCGTGCCGAGCCTGCCGTCTACTTCAAGGAGCAGTTTC 82
Oryctolagus_cuniculus GTCGCGCCTGGCCGCCGCCGAGCCCGTCGTCTACTTCAAGGAGCAGTTTC 82

Mus_musculus      TGGACGGAGATGCCTGGACCAACCGCTGGGTGGAATCCAAACATAAG 129
Ratus_norvegicus  TGGACGGAGATGCCTGGACCAACCGCTGGGTGGAATCCAAACATAAG 129
Homo_sapiens      TGGACGGAGACGGGTGGACTTCCCGCTGGATCGAATCCAAACACAAG 129
Oryctolagus_cuniculus TGGACGGAGATGGGTGGACCGAGCGCTGGATCGAATCCAAACACAAG 129

Mus_musculus      TCCGATTTTGGCAAATTTGTCCTCAGTTCTGGCAAATTTTACGG 173
Ratus_norvegicus  TCTGATTTTGGCAAATTCGTCTCAGTTCTGGCAAATTTCTACGG 173
Homo_sapiens      TCAGATTTTGGCAAATTCGTTCTCAGTTCCGGCAAGTTCTACGG 173
Oryctolagus_cuniculus TCCGATTTTGGCAAATTCGTCTCAGTTCCGGCAAGTTCTACGG 173

Mus_musculus      GGACCTGGAGAAGGATAAAGGGTTGCAGACAAGCCAAGATGCCGATTTT 223
Ratus_norvegicus  GGACCAAGGAGAAGGATAAAGGGTTGCAGACAAGCCAAGATGCCGATTTT 223
Homo_sapiens      TGACGAGGAGAAAGATAAAGGGTTGCAGACAAGCCAAGATGCACGCTTTT 223
Oryctolagus_cuniculus CGATCAGGAGAAAGATAAAGGGTTGCAGACCAGCCAGGACGCCCGCTTCT 223
Euglena

Mus_musculus      ACGCGCTGTCCGCCAAATTCGAACCCCTTCAGCAACAAGGGCCAGACA 270
Ratus_norvegicus  ACGCGCTGTCCGCCAGATTCGAACCCCTTCAGCAACAAGGGCCAGACA 270
Homo_sapiens      ATGCTCTGTGCGGCCAGTTTCGAGCCCTTCAGCAACAAGGGCCAGACG 270
Oryctolagus_cuniculus ACGCCCTGTGCGGCCGATTTCGAGCCGTTTCAGCAACAAGGGCCAGCCA 270

Mus_musculus      CTGGTGGTACAGTTACCGTGAAGCATGAGCAGAATATCGACTGTGGGGG 320
Ratus_norvegicus  CTGGTGGTACAGTTACCGTGAAGCATGAGCAGAATATCGACTGTGGGGG 320
Homo_sapiens      CTGGTGGTGCAGTTACCGTGAAACATGAGCAGAACATCGACTGTGGGGG 320
Oryctolagus_cuniculus CTGGTGGTGCAGTTACCGTGAAACACGAGCAGAACATTGACTGCGGGGG 320

Mus_musculus      CGGCTACGTGAAGCTGTTTCCGAGTGGCTTGGACCAGAAGGACATGCATG 370
Ratus_norvegicus  CGGCTACGTGAAGCTGTTTCCGGGTGGCTTGGACCAGAAGGACATGCATG 370
Homo_sapiens      CGGCTATGTGAAGCTGTTTCCCTAATAGTTTGGACCAGACAGACATGCACG 370
Oryctolagus_cuniculus CGGCTACGTGAAGCTGTTTCCGGCCGGCCTGGACCAGAAGGACATGCACG 370

Mus_musculus      GAGACTCAGAATATAACATCATGTTTGGTCCGGACATCTGCGGTCCTGGC 420
Ratus_norvegicus  GAGACTCAGAATATAACATCATGTTTGGTCCGGACATCTGCGGTCCTGGC 420
Homo_sapiens      GAGACTCAGAATACAACATCATGTTTGGTCCCGACATCTGTGGCCCTGGC 420
Oryctolagus_cuniculus GGGACTCTGAGTACAACATCATGTTTGGTCCTGACATCTGTGGCCCCGGC 420

Mus_musculus      ACCAAGAAGGTTTCATGTCATCTTTAACTACAAGGGCAAGAATGTGCTGAT 470
Ratus_norvegicus  ACCAAGAAGGTTTCATGTCATCTTTAACTACAAGGGCAAGAACGTGCTGAT 470
Homo_sapiens      ACCAAGAAGGTTTCATGTCATCTTCAACTACAAGGGCAAGAACGTGCTGAT 470
Oryctolagus_cuniculus ACCAAGAAGGTTTCACGTGTCATCTTCAACTACAAGGGCAAGAACGTGCTGAT 470

Mus_musculus      CAACAAGGATATCCGGTGTAAAGGATGATGAATTCACACACCTATACACAC 520
Ratus_norvegicus  CAACAAGGATATCCGGTGTAAAGGATGATGAATTTACACATCTATACACGC 520
Homo_sapiens      CAACAAGGACATCCGTTGCAAGGATGATGAGTTTACACACCTGTACACAC 520
Oryctolagus_cuniculus CAACAAGGACATCCGTTGCAAGGACGACGAGTTCACACACCTGTACACGC 520

Mus_musculus      TGATTGTGCGGCCAGACAACACCTATGAGGTGAAAATTGACAACAGCCAG 570
Ratus_norvegicus  TGATTGTGCGGCCAGACAACACCTACGAGGTGAAAATTGACAACAGCCAG 570
Homo_sapiens      TGATTGTGCGGCCAGACAACACCTATGAGGTGAAGATTGACAACAGCCAG 570

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Oryctolagus_cuniculus	TGATCGTGC GGCCGGACAACACGTATGAGGTGAAGATTGACAACAGCCAG	570
Mus_musculus	GTGGAGTCAGGCTCCTTGGAGGATGATTGGGACTTTCTGCCACCCAAGAA	620
Ratus_norvegicus	GTGGAGTCGGGCTCCTTGGAGGATGATTGGGACTTTCTGCCGCCCAAGAA	620
Homo_sapiens	GTGGAGTCCGGCTCCTTGGGAAGACGATTGGGACTTCTGCCACCCAAGAA	620
Oryctolagus_cuniculus	GTGGAGTCGGGCTCCTTGGAGGATGACTGGGACTTCTACCCCCCAAGAA	620
Mus_musculus	GATAAAGGACCCTGATGCTGCCAAGCCGGAAGACTGGGATGAACGAGCCA	670
Ratus_norvegicus	GATTAAGGATCCTGACGCTGCCAAGCCAGAAGACTGGGATGAACGAGCCA	670
Homo_sapiens	GATAAAGGATCCTGATGCTTCAAACCGGAAGACTGGGATGAGCGGGCCA	670
Oryctolagus_cuniculus	GATAAAGGACCAGATGCCTCGAAGCCTGAAGACTGGGACGAGCGGGCCA	670
Mus_musculus	AGATCGATGACCCACAGATTCCAAGCCTGAGGACTGGGACAAGCCA	717
Ratus_norvegicus	AGATTGATGACCCACAGATTCCAAGCCTGAGGACTGGGACAAGCCA	717
Homo_sapiens	AGATCGATGATCCACAGACTCCAAGCCTGAGGACTGGGACAAGCCC	717
Oryctolagus_cuniculus	AGATCGACGACCCACGGACTCCAAGCCCAGGACTGGGACAAGCCC	717
Mus_musculus	GAGCACATCCCTGACCCTGATGCTAAGAAGCCTGAGGACTGGGATGAAGA	767
Ratus_norvegicus	GAGCACATCCCTGACCCTGATGCTAAGAAGCCTGAGGACTGGGACGAAGA	767
Homo_sapiens	GAGCATATCCCTGACCCTGATGCTAAGAAGCCCGAGGACTGGGATGAAGA	767
Oryctolagus_cuniculus	GAGCACATCCCCGACCCGACGGAAGAAGCCGAAGACTGGGACGAAGA	767
Mus_musculus	GATGGATGGAGAGTGGGAACCACCAAGTGATTCAAAATCCTGAATACAAGG	817
Ratus_norvegicus	GATGGATGGAGAGTGGGAACCACCAAGTGATTCAAAATCCTGAATACAAGG	817
Homo_sapiens	GATGGACGGAGAGTGGGAACCCCAAGTGATTCAAGACCTGAGTACAAGG	817
Oryctolagus_cuniculus	AATGGACGGAGAGTGGGAGCCGCCGGTGATTCAAGACCCCGAGTACAAGG	817
Mus_musculus	GCGAGTGGAACCACGTCAAATTGACAACCCAGATTACAAGGGTACCTGG	867
Ratus_norvegicus	GCGAATGGAAGCCACGTCAAATTGACAACCCAGATTACAAGGGTACCTGG	867
Homo_sapiens	GTGAGTGGAAGCCCGGCAGATCGACAACCCAGATTACAAGGGCACTTGG	867
Oryctolagus_cuniculus	GTGAGTGGAAGCCCGGCAGATCGACAACCCGATTACAAGGCACCTGG	867
Mus_musculus	ATACACCCAGAAATTGACAACCCCTGAATACTCCCCCGATGCAATATCTA	917
Ratus_norvegicus	ATACACCCAGAGATTGACAATCCTGAATACTCCCCCGATGCGAATATCTA	917
Homo_sapiens	ATCCACCCAGAAATTGACAACCCCGAGTATTCTCCCGATCCCAGTATCTA	917
Oryctolagus_cuniculus	ATCCACCCCGAAATCGACAACCCCGAGTACTCGCCCGACGCTAACATCTA	917
Mus_musculus	TGCCTATGATAGTTTTGCTGTACTGGGCCTAGATCTCTGGCAGGTCAAGT	967
Ratus_norvegicus	TGCCTATGATAGTTTTGCTGTACTGGGCCTAGACCTCTGGCAGGTCAAGT	967
Homo_sapiens	TGCCTATGATAACTTTGGCGTGTGGGCCTGGACCTCTGGCAGGTCAAGT	967
Oryctolagus_cuniculus	TGCCTACGACAGCTTTGCCGTGTGGGCCTGGACCTCTGGCAGGTCAAGT	967
Mus_musculus	CTGGGACAATCTTTGACAATTCCTCATCACCAATGATGAGGCCTATGCA	1017
Ratus_norvegicus	CTGGCACAATTTTGGACAATTCCTCATCACCAATGATGAGGCCTATGCA	1017
Homo_sapiens	CTGGCACCATCTTTGACAATTCCTCATCACCAACGATGAGGCATACGCT	1017
Oryctolagus_cuniculus	CGGGCACCATCTTCGACAATTCCTCATCACCAACGATGAGGCGTACGCA	1017
Mus_musculus	GAGGAGTTTGGCAATGAGACGTGGGGTGTTACCAAGGCTGCAGAGAAGCA	1067
Ratus_norvegicus	GAGGAGTTTGGCAATGAGACGTGGGGTGTTACCAAGGCTGCAGAGAAGCA	1067
Homo_sapiens	GAGGAGTTTGGCAACGAGACGTGGGGCGTAACAAAGGCAGCAGAGAAACA	1067
Oryctolagus_cuniculus	GAGGAGTTTGGCAACGAGACGTGGGGCGTCACCAAGACGGCCGAGAAGCA	1067
Mus_musculus	GATGAAGGACAAGCAGGATGAGGAGCAGAGGCTTAAGGAAGAAGAAGAGG	1117
Ratus_norvegicus	GATGAAGGACAAGCAGGATGAGGAGCAGAGGCTTAAGGAAGAAGAAGAGG	1117
Homo_sapiens	AATGAAGGACAAACAGGACGAGGAGCAGAGGCTTAAGGAGGAGGAAGAAG	1117
Oryctolagus_cuniculus	GATGAAGGACAAGCAGGACGAGGAGCAGCGGCTGAAGGAGGAGGAGGAGG	1117
Mus_musculus	ACAAGAAGCGTAAAGAGGAAGAAGAAGCTGAGGA---TAAAGAGGATGAT	1164
Ratus_norvegicus	ACAAGAAGCGTAAAGAGGAAGAGGAGGCCGAGGA---TAAAGAGGATGAG	1164
Homo_sapiens	ACAAGAAACGCAAGAGGAGGAGGAGGCCAGAGGA---CAAGGAGGATGAT	1164
Oryctolagus_cuniculus	AGAAGAAGCGGAAGGAGGAGGAGGAGGCCGAGGAGGACGAGGAGGACAAG	1167

Mus_musculus	GATGACAGAGATGAAGATGAGGACGAAGAAGATGAGAAGGAGGAAGATGA	1214
Ratus_norvegicus	GATGACAGAGATGAAGATGAAGATGAAGAGGATGAGAAGGAAGAAGATGA	1214
Homo_sapiens	GAGGACAAAGATGAGGATGAGGAGGATGAGGAGGACAAGGAGGAAGATGA	1214
Oryctolagus_cuniculus	GACGACAAGGAGGACGAGGATGAGGACGAGGAGGACAAGGACGAGGAGGA	1217
Mus_musculus	GGAAGAAT---CCCCTGGCCAAGCCAAGGATGAGCTGTAG	1251
Ratus_norvegicus	GGAGGATG---CCACTGGCCAAGCCAAGGATGAGCTGTAG	1251
Homo_sapiens	GGAGGAAGATGTCCCCGGCCAGGCCAAGGACGAGCTGTAG	1254
Oryctolagus_cuniculus	GGAGGAGGCGGCCGCCCGGCCAGGCCAAGGACGAGCTGTAG	1257